



IBM Software Group

# IBM® TXSeries® for Multiplatforms V6

## *Architecture overview*



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This presentation will provide an overview of the Architecture of IBM TXSeries for Multiplatforms V6.

## Goals

- Role in the enterprise environment
- Understand the high level architecture of TXSeries for Multiplatforms V6



The goal of this presentation is to provide a high level overview of the architecture of TXSeries for Multiplatforms V6 and CICS<sup>®</sup> based applications. It also provides an overview of how TXSeries for Multiplatforms based applications can be used in an enterprise environment.

## Agenda

- TXSeries in an Enterprise environment
- TXSeries architecture
  - ▶ Major components of a CICS region
  - ▶ Application Server management



This presentation will cover the TXSeries architecture and describe the role it plays in the enterprise computing environment.

## Overview

- IBM TXSeries for Multiplatforms provides the foundation to run many high-volume, business critical enterprise applications
  - ▶ It provides an environment to run CICS applications in distributed environments
  - ▶ TXSeries for Multiplatforms V6 delivers a Services Orientated Architecture hosting infrastructure
- Allows customers to scale upwards to IBM CICS Transaction Server as the business needs grow



TXSeries for Multiplatforms V6 continues and expands on the tradition of providing a distributed environment in which to host critical business applications built around the CICS programming model. As the needs of the business grow, you have the option to scale upwards to CICS Transaction Server.

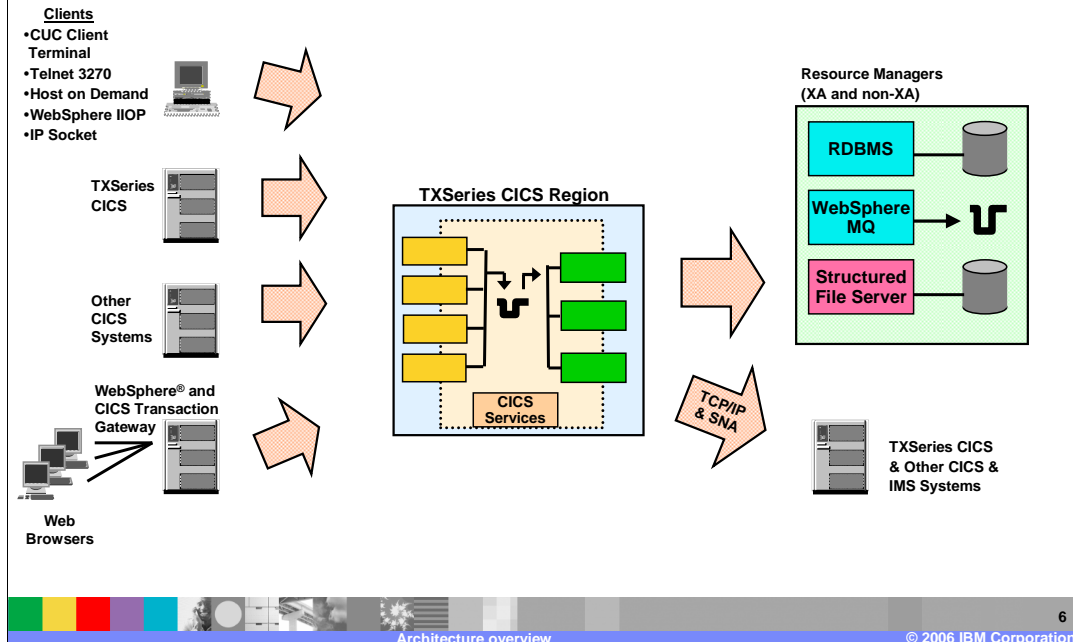
## Section

# ***The role of TXSeries in the enterprise environment***



This section examines the role of TXSeries for Multiplatforms in the enterprise computing environment.

## Architecture: Flows in and out of server



The CICS transaction processing environment consists primarily of CICS clients, one or more CICS regions and Resource Managers.

Work requests come from a number of sources, such as a CICS client or another CICS system into a CICS region. The CICS Client machines can be workstations that present a graphical user interface to CICS, or simply devices, such as an automated teller machine and bar-code readers.

The CICS region runs the application and can connect to resource managers such as RDBMS databases, messaging systems, other CICS systems or other enterprise systems.

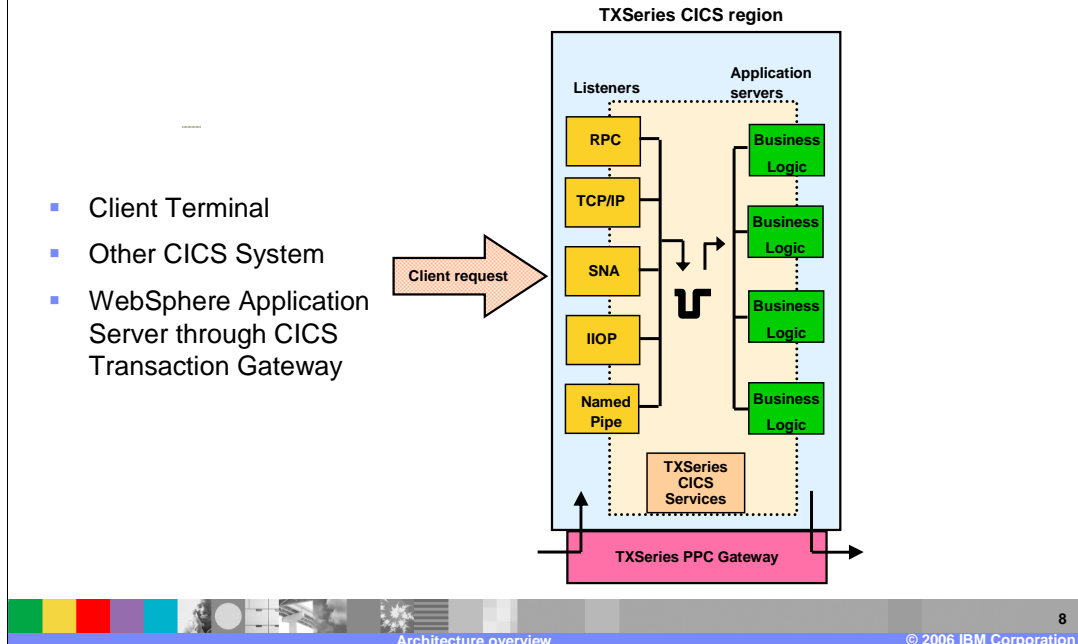
## Section

# ***TXSeries components***



In this section some of the important components of TXSeries will be discussed.

## Components of a CICS region



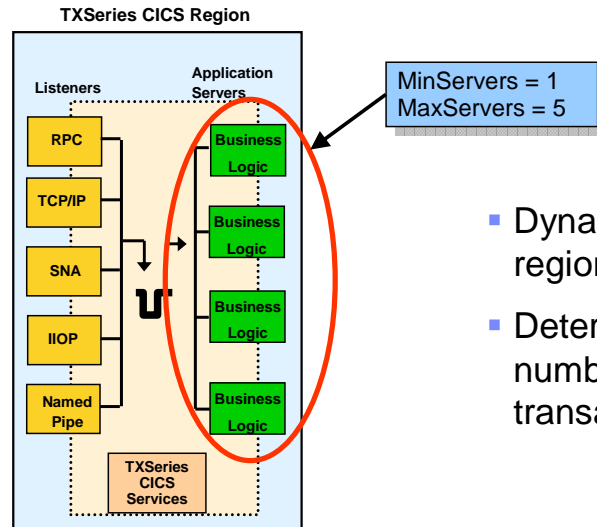
A client request comes from a CICS client or other CICS systems, which attach to a CICS region and through which the CICS transactions are run.

The CICS region on the other hand, includes Listeners, which receive requests to run transactions, then hand them over for prioritization, scheduling, and dispatching to an application server for processing. A pool of application servers run the transactions and interact with the requestor to send or receive input and output.

CICS services are used to manage the whole CICS region. The whole of this is encapsulated in a logical entity called a TXSeries CICS region.



## Minimum and maximum servers



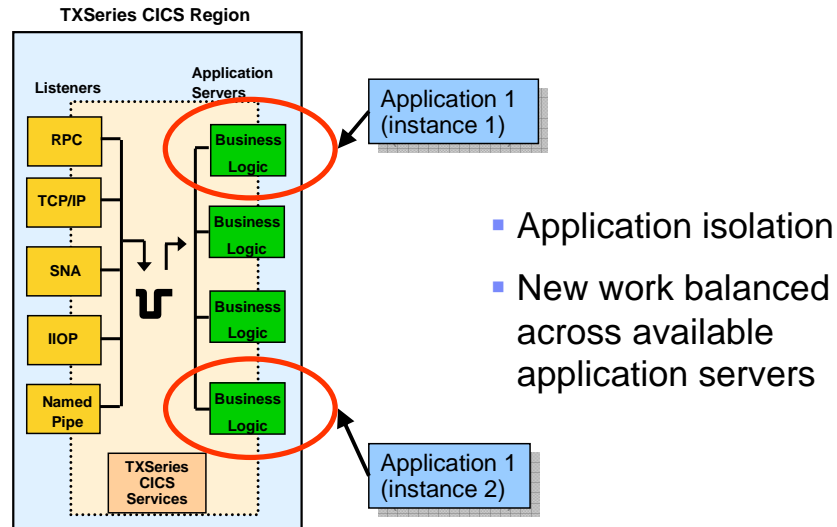
- Dynamically managed by region between limits
- Determines maximum number of simultaneous transactions in region

manages a pool of application servers, and keeps the number of application servers between a predefined minimum and maximum. The maximum number of application servers made available on the CICS region determines the maximum number of simultaneous transactions running on the CICS region.

When the CICS region is started, there will be minimum number of application servers invoked, with new application servers created if there are no application servers available to service a new inbound request. New application servers are created subject to a limit defined as maximum. Unused application servers are terminated if they remain idle for a specified time limit.

You can identify correct values for the minimum and maximum limits through testing, tuning and observation.

## Application isolation



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The business applications that are run under different application servers are isolated, so two applications running concurrently on two different application servers will not affect each other's operations. This is true even for applications of the same instance.

New work requests coming to the CICS region will automatically be balanced across available application servers.

## Summary

- Introduced the high level architecture of a TXSeries system
- Discussed different architecture flows into and out of a TXSeries system



In summary, this presentation covered the TXSeries for Multiplatforms architecture at a high level and showed some of the types of client and other enterprise systems TXSeries can interact with.

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